



U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

Subject: CONTROL SYSTEM LOCKS

Date: 7/25/85
Initiated by: ACE-100

AC No: 23.679-1
Change:

1. PURPOSE. This advisory circular (AC) provides methods acceptable to the Administrator for showing compliance with the provisions of section 23.679(a) of the Federal Aviation Regulations (FAR), or section 3.341(a) of the Civil Air Regulations (CAR), concerning the provisions of an unmistakable warning to the pilot when the control lock is engaged. Consideration will be given to any other method of compliance the applicant elects to present. This AC is neither mandatory nor regulatory in nature and does not constitute a regulation.

2. RELATED REGULATIONS. Section 23.679, Part 23 of the FAR; section 3.341, Part 3 of the CAR.

3. BACKGROUND. Section 23.679(a) of the FAR and section 3.341(a) of the CAR require that if there is a device to lock the control system, there must be a means to give unmistakable warning to the pilot when the lock is engaged. Several accidents have occurred because the pilot did not remove the control system lock prior to takeoff. Many such accidents relate to internally applied locks, mostly pins installed at the control wheel column. Misuse and alterations of these installed locking devices, together with neglect by the pilot to perform a control freedom check before takeoff, contributed to such accidents.

4. ACCEPTABLE METHOD OF COMPLIANCE. When evaluating a control lock system, the following factors should be considered in finding compliance with the applicable regulation:

a. The warning should be easily discernible during both day and night operations. Color, location, shape, and accessibility of the device, ease of removal with the pilot seated in flying position, and legibility of any placards, etc., should be considered.

b. The system operation should be obvious. It should be possible to apply the lock only in such a manner that the required warning is provided.

c. When engaged, the lock should, by design, limit the operation of the airplane so that the pilot receives unmistakable warning in the cockpit before or at the start of takeoff by an effective means such as:

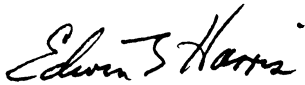
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(1) preventing the application of sufficient engine power to attempt a takeoff;

(2) displacement of primary pilot controls, such as the control wheel full forward;; or

(3) an **aural** warning device which cannot be disengaged,

d. For airplanes with separate locks for throttle and control column, where one lock (e.g., throttle) can be **removed independently** of the other, each lock should independently meet the criteria of **paragraph 4.c.**



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